

NOAA CLIMATE PROGRAM OFFICE

Upcoming events: February 4th - 9th: American Society of Limnology and Oceanography (ASLO) Aquatic Sciences Meeting, Santa Fe, NM; February 27th - March 1st: RISA PI Meeting, San Diego, CA; February 27th - March 1st Arctic Monitoring and Assessment Program (AMAP) Arctic Carbon Cycle Workshop, Seattle, WA; March 20th-23rd: 6th Annual Climate Prediction Applications Science Workshop (CPASW), Seattle, WA; April 10th - 11th: Climate Working Group (CWG) Spring Meeting, Asheville, NC; April 10th - 12th: Sea Grant Coastal Extension Meeting, Charleston, SC; May 13th -16th: PACLIM 2007: Abrupt Climate Change - Causes and Ecosystem Responses, Pacific Grove, CA.

SPOTLIGHT: NWS RELEASES LOCAL TEMPERATURE OUTLOOK

On January 18, 2007, the National Weather Service (NWS) released its first official local climate outlook product, the Local 3-Month Temperature Outlook (L3MTO). The NWS Climate Services Division (CSD) and the Climate Prediction Center (CPC) developed the product under the auspices of the Climate Regional Decision Support program, and in collaboration with NOAA Regional Integrated Sciences and Assessments (RISA) scientists.

The L3MTO will augment NWS climate services by providing local-level outlooks translated from the CPC national forecasts to over 1000 locations nationwide, including Alaska and Hawaii. The CPC forecast, as well as the L3MTO forecasts, are produced monthly for 13 three-month forecast periods for one year. It is available on national and local NWS websites under the heading "Climate" (<http://www.weather.gov/climate/l3mto.php>). In addition to the forecasts, there are user-friendly navigation tools and help tutorials, which define terms, explain the product and its formats, provide interpretations, and discuss the benefits and limitations of the outlooks.

The development of the L3MTO is a direct result of requests from decision makers asking for more detailed, site-specific outlooks in their respective areas to help them make economically, socially, and environmentally sound decisions. A variety of users, including the general public, provided input on the best formats to represent the information included in the L3MTO product. Consequently, the information is available in a variety of formats to address decision makers' varying needs. Feedback on the product from users during its "Experimental Period" has been overwhelmingly positive. The L3MTO supports NOAA's commitment to provide information to the public for better decision support resources by delivering local, easily accessible, climate information to our customers. (Source: Drs. Fiona Horsfall and Mike Brewer, NWS-CSD)

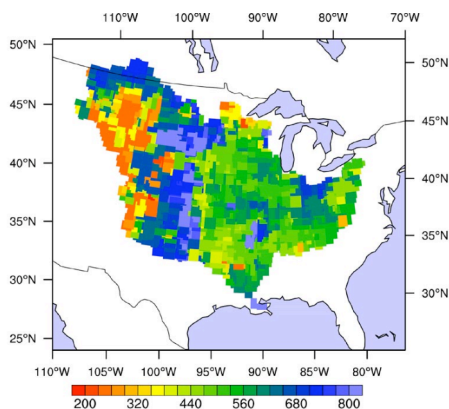


Figure: When merged with computer models, Grace water storage data can be used for water resources and agricultural applications. Image credit: NASA

Detecting changes in water storage using satellite data

In the November issue of *Nature*, an article entitled "Water from on High" reported on the use of GRACE (Gravity Recovery and Climate Experiment) data to study the Earth's water cycle, specifically examining the changes in water stored in river basins around the world. CPO's Climate Prediction Program for the Americas (CPPA) is a co-sponsor of the research highlighted in the *Nature* article. GRACE, a pair of satellites maintained by NASA and the German Aerospace Center, is designed to record variations in the Earth's gravitational field on a monthly time scale. The change in the amount of water stored on and below the Earth's surface

WELCOME!

CPO would like to welcome new staff members **Cassandra Blizzard, Anita Jones, and Angela Strachan.**

Cassandra is CPO's new **Administrative Assistant** while **Angela** and **Anita** are CPO's newest members of the **Budget Team.**

(e.g. rivers, lakes, basins, snow cover, groundwater, soil moisture, etc.) is an attributing factor to those monthly variations. One example of the use of GRACE data in the study of the terrestrial water budget is in the Mississippi river basin where GRACE data are analyzed against land-surface models to better understand the terrestrial water budget in the area. (Source: Anarita Marriotti, CPO; Drs. Dennis P. Lettenmaier and James S. Famiglietti, 2006: *Water from on high*. *Nature*, Vol. 444, 562-563.)

31st Annual Climate Diagnostic Workshop

In October, the NOAA Climate Prediction Center and the Climate Diagnostics Center co-hosted the 31st Climate Diagnostics and Prediction Workshop in Boulder, CO. This annual workshop brings together climate scientists to present and discuss recent scientific research and developments in prediction. The three themes of this year's workshop included: (i) climate predictions/predictability, (ii) understanding and attribution of climate variability, and (iii) the NOAA Climate Test Bed. A desired outcome of the meeting was the exploration of existing predictive capabilities and regional decision support products. Workshops such as this provide an opportunity for NOAA's climate science community to gather together to share information and ideas and work on existing issues facing their research.



Image Credit: Barb DeLuisi & Ed O'Lenic

(Source: <http://www.cpc.noaa.gov/products/outreach/CDPW31.shtml>)

New NOAA Ozone Depleting Gas Index

In December, the Global Monitoring Division of the NOAA Earth Systems Research Laboratory debuted the NOAA Ozone Depleting Gas Index (ODGI). This index is an online tool with user-friendly graphs that chart levels of ozone depleting gases using color-coding for each gas and a scale that ranges from 1 to 100. The ODGI tracks ozone depleting gas concentrations over two main areas of the earth: the Antarctic region, where there currently is a hole in the ozone, and mid-latitudes, where most of the Earth's population resides. The ODGI is also used to examine how concentrations of different gases affect ozone recovery. This index shows the progress humans have made in reducing the amount of ozone depleting gases to a level where they will no longer cause harm to the ozone layer. This website is a prime example of NOAA's commitment to producing climate science products that simplify complex information, making it easier for deci-

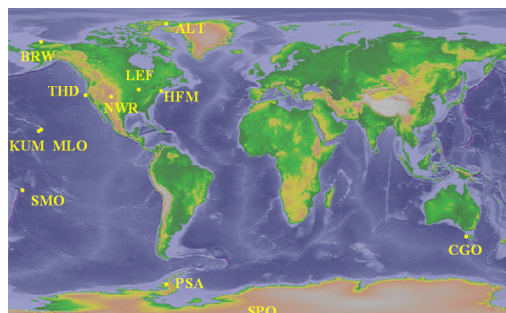


Figure: The dots represent the locations where ESRL takes measurements for the index. *Image credit:*

<http://www.cmdl.noaa.gov/odgi/>

sion makers and the public to understand and use. To use the ODGI, please visit: <http://www.cmdl.noaa.gov/odgi/>. (Source: Drs. David Hofmann and Steve Montzka, ESRL; NOAA News Story 2763).

NCDC Releases 2006 Climate and Weather Report

The National Climatic Data Center (NCDC) posted its annual findings on the weather and climate of the US for 2006. According to this report, 2006 was the warmest year on record in the US and nearly matched the global temperature record set in 1998. For 2006, the average annual temperature for the US

was 2.2° F above the 20th century mean and 0.07° F above the previous US record set in 1998. NCDC takes measurements throughout the year and reports on them monthly. The measurements are taken using the US Historical Climatology Network (USHCN), which is comprised of over 1,200 stations across the US. One benefit of this warm period, which was particularly

January-December 2006 National Rank

National Climatic Data Center/NESDIS/NOAA

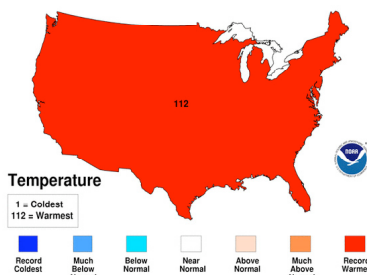


Image credit: NCDC -

<http://www.ncdc.noaa.gov>

intense between October – December, is the decrease in residential energy demand across the US. (Source: NCDC Annual Report - <http://www.ncdc.noaa.gov/oa/climate/research/2006/ann/ann06.html>, NOAA News)

The final 2006 Scientific Assessment of Ozone Depletion was submitted to the United Nations Environment Programme (UNEP) in December and is scheduled to be released this April. A full report on the assessment will follow its release. Visit: <http://esrl.noaa.gov/csd/assessments/2006/>